

ON A NEW TREMATODE GENUS *PROACETABULORCHIS* AND
A NEW SPECIES OF THE GENUS *PROCRASSIPHIALA* VERMA
1936 FROM RANGOON.

By B. S. GOGATE, Biological Department, University of Rangoon.

***Proacetabulorchis prashadi*, gen. et sp. nov.**

Location.—Liver.

Description.—Body very elongated, $3\cdot4 \times 0\cdot3\cdot0\cdot5^1$; maximum breadth in the region of ventral sucker; cuticle smooth. Oral sucker sub-terminal $0\cdot15\cdot0\cdot18 \times 0\cdot18$, with moderately developed musculature. Ventral sucker $0\cdot4\cdot0\cdot448 \times 0\cdot41\cdot0\cdot5$, with stronger musculature than the oral, and close to the oral. Mouth subterminal; prepharynx indistinct; pharynx $0\cdot07\cdot0\cdot077 \times 0\cdot08\cdot0\cdot09$; oesophagus $0\cdot1\cdot0\cdot12$ long; caeca reaching the end of the middle third of body length, almost all their way covered by uterine coils and vitellaria.

Testes moderate sized, oval, smooth margined, directly preacetabular, partially overlapping, and one behind the other: Anterior testis $0\cdot21\cdot0\cdot23 \times 0\cdot106\cdot0\cdot12$; Posterior testis $0\cdot17\cdot0\cdot18 \times 0\cdot13\cdot0\cdot14$, partly overlapped posteriorly by ventral sucker. Cirrus sac small, $0\cdot14\cdot0\cdot15 \times 0\cdot07\cdot0\cdot08$, median, enclosing a very much coiled vesicula seminalis and opening along with the uterus close to the base of pharynx.

Ovary roundish, $0\cdot16\cdot0\cdot18 \times 0\cdot18\cdot0\cdot19$, dextral, postacetabular separated by some distance from ventral sucker. Shell gland near postero-mesial margin of ovary. Receptaculum seminis and Laurer's canal indistinct in whole mount. Uterus very much coiled, occupying whole of the body behind ventral sucker masking almost all other anatomical details from view. Vitellaria composed of moderately sized follicles, lateral, and usually extra and overcaecal but occasionally intercaecal, commencing from behind the ventral sucker to about $1\cdot49$ of total body length, thus occupying a little more than the middle third of body length in anterior part of body. Eggs, yellow, operculate, $0\cdot031\cdot0\cdot0315 \times 0\cdot016\cdot0\cdot0175$. Excretory bladder Y-shaped, excretory pore at posterior tip of body.

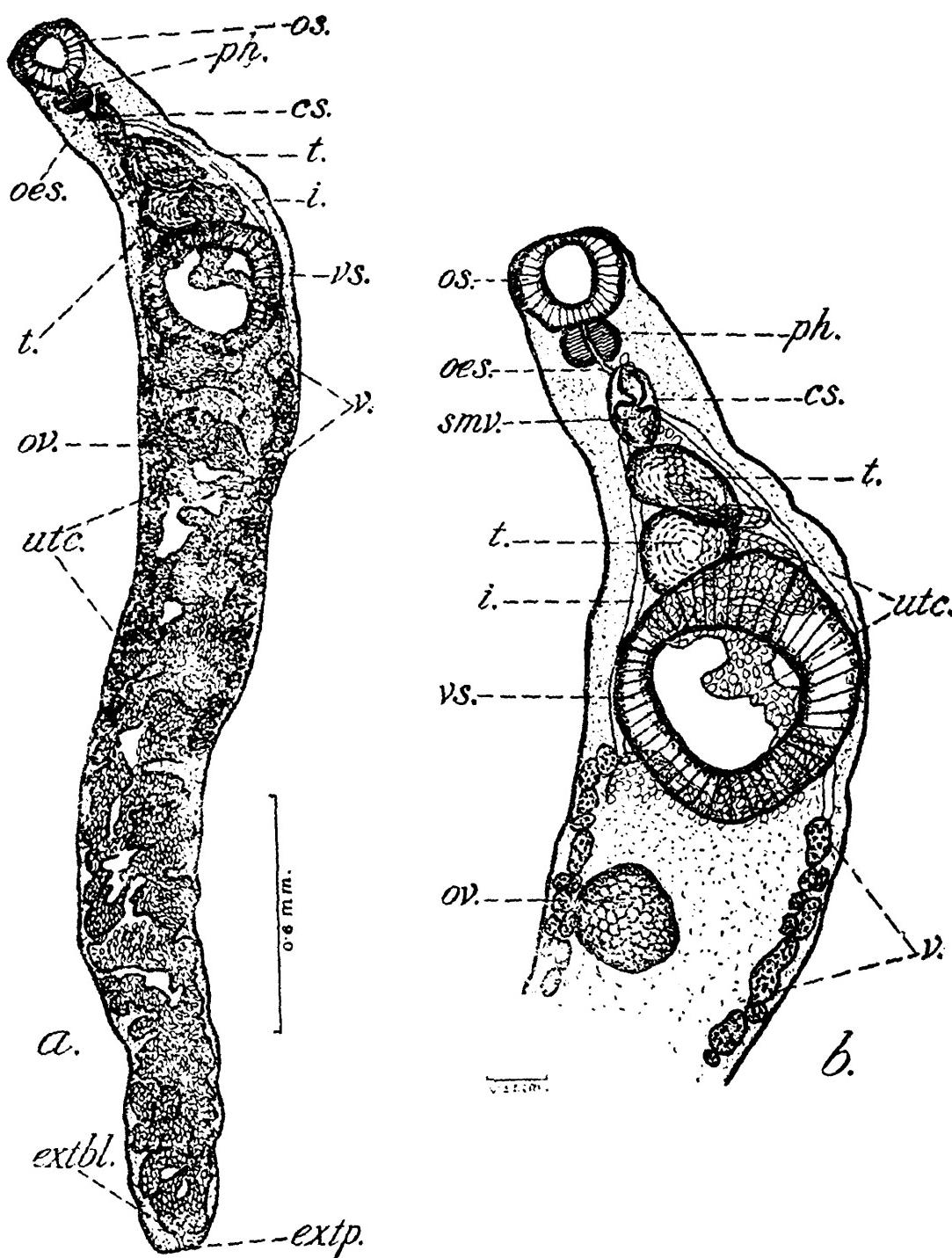
Remarks.—There are only two genera in the subfamily Dicrocoeliinae Looss 1899, in which both the testes are preacetabular, namely, *Platynotrema* Nicoll 1914 and *Euparadistomum* Tubangui 1931. From both of these genera *Proacetabulorchis* differs in having:—

- (a) narrow elongated body,
- (b) position of ventral sucker close to the oral,
- (c) genital pore at base of pharynx,
- (d) obliquely situated partially overlapping testes,
- (e) dextral position of ovary much separated from ventral sucker,
- (f) commencement of vitellaria from behind ventral sucker, and
- (g) distribution of uterine coils.

¹ All measurements in mm.

These characters are utilized in drawing up the following diagnosis of *Proacetabulorchis*:

Dicrocoeliinae with, narrow elongated body ; smooth cuticle ; ventral sucker larger than the oral and close to oral ; genital pore at base of



TEXT-FIG. 1.—*Proacetabulorchis prashadi*, gen. et sp. nov., a. Entire, ventral view. b. Anterior portion of body, ventral view.

pharynx ; testes, asymmetrical, preacetabular, and partially overlapping each other ; ovary roundish, dextral, situated in anterior half of the body and widely separated from ventral sucker ; uterus occupying whole body behind ventral sucker, masking all other details from view ; vitellaria lateral, commencing behind ventral sucker, extra, over and occasionally intercaecal.

Parasitic in liver of birds.

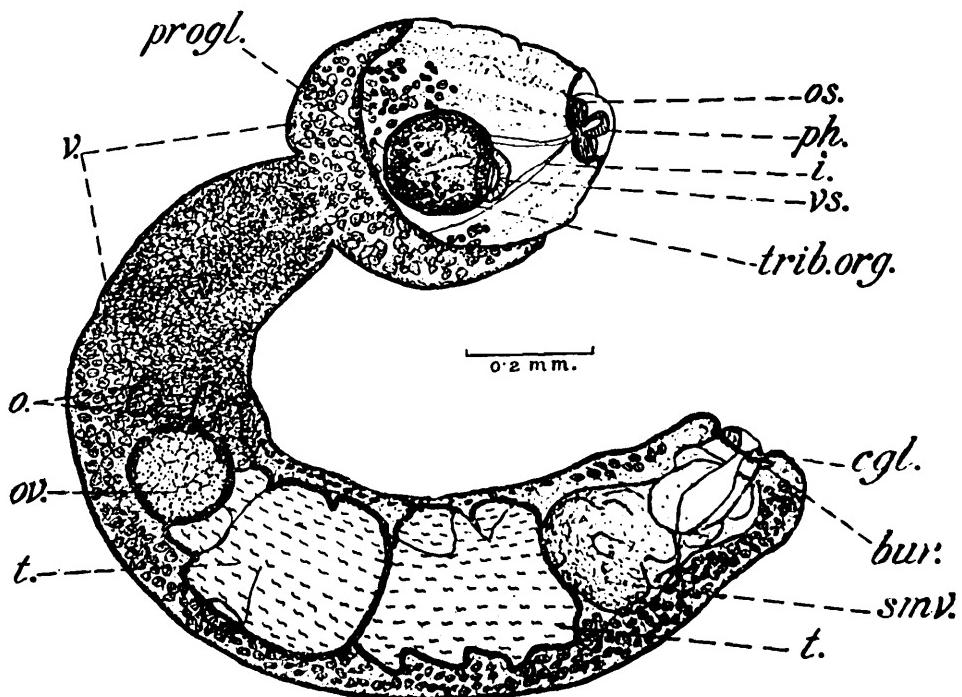
Genotype.—*Proacetabulorchis prashadi*, sp. nov.¹

The species is dedicated to Dr. Baini Prashad in recognition of the facilities afforded to the author during his stay in Calcutta in connection with the study of helminth literature in the library of the Indian Museum.

Procrassiphiala halcyonae, sp. nov.

Location.—Intestine of the kingfisher *Halcyon smyrnensis* (Linn. 1758).

Description.—Total length 2.229. Anterior body segment 0.598×0.440, short, flat, with lateral folds more prominent posterolateral to tribocytic organ. Anterior tip of anterior body segment ventrally curved, with the result that pharynx appears anterior to oral sucker. Ventral sucker 0.0557×0.0901, transversely elongated, and approximately half overlapped by tribocytic organ. Tribocytic organ elliptical, with a long median furrow, without marginal papillae, and with distinct proteolytic glands situated at its posterior margin. Oral sucker approximately 0.1 in diameter; prepharynx indistinct; pharynx 0.045×0.037, communicating with a short oesophagus indistinct because of the folding of the anterior tip of body. Caeca distinct upto the region of tribocytic organ. Posterior body segment cylindrical, curved, 1.631×0.345, separated from the preceding segment by a constriction.



TEXT-FIG. 2.—*Procrassiphiala halcyonae*, sp. nov., Entire, ventral view.

Testes very large, lobed structures, situated one behind the other and partially overlapping, occupying posterior half of body. Anterior testis 0.370×0.278, a little overlapped by ovary. Posterior testis 0.370×0.287. Vesicula seminalis coiled, voluminous. Ovary 0.172,

¹ Type-specimen (No.W. 3431/1) in the Collection of the Zoological Survey of India, Indian Museum, Calcutta.

spherical, situated in middle of body approximately 0·49 from inter-segmental constriction. Genital opening on a cone lodged in bursa copulatrix which is not very deep. Ova few, $0\cdot073-0\cdot082 \times 0\cdot047-0\cdot051$. Vitellaria in both segments of body, not passing anterior to tribocytic organ, very thick between ovary and anterior segment, and continued behind ovary upto posterior tip of body.¹

Remarks.—Characteristically large testes, 2·72 times longer posterior body segment, elleptical tribocytic organ, approximately one third in length to that of anterior body segment, absence of prepuce and muscular structure in the walls of bursa copulatrix, bring this form under the genus *Procrassiphiala* Verma 1936. Verma's diagnosis of the genus is very brief and is not supplemented by any figure. Of the two species allotted to this genus by Verma, *P. cuckooai* Verma 1936 has because of anatomical considerations been transferred by Dubois (1938) to the genus *Neodiplostomum* Railliet 1919. Dubois has further added *Neodiplostomum fungiloides* Semenov 1927 to Verma's genus. Thus there are two species under the genus *Procrassiphiala* from which the present form is separated by the combination of characters given in the following table :—

—	<i>P. titricum</i> Verma 1936.	<i>P. fungiloides</i> (Semenov 1927) Dubois 1938.	<i>P. halcyonae</i> , sp. nov.
Length of posterior segment.	1·35-1·39	2·07	2·72
Length of anterior segment.			
Ventral sucker	separated from tribocytic organ.	?	half overlapped by tribocytic organ.
Tribocytic organ	$0\cdot336 \times 0\cdot250-0\cdot290$	$0\cdot342 \times 0\cdot365$	$0\cdot180 \times 0\cdot172$
Testes	$0\cdot67 \times 0\cdot42$ $0\cdot63 \times 0\cdot46$	$0\cdot480$	$0\cdot370 \times 0\cdot278$ $0\cdot370 \times 0\cdot287$
Ovary	$0\cdot126 \times 0\cdot168$	$0\cdot114 \times 0\cdot205$	$0\cdot172$
Eggs	$0\cdot1008-0\cdot1009 \times 0\cdot050-0\cdot058$	$0\cdot081-0\cdot088 \times 0\cdot055$	$0\cdot073-0\cdot082 \times 0\cdot047-0\cdot051$
Host	<i>Sarcogrammus indicus</i> Bodd. (Charadriiformes)	<i>Scolopax rusticola</i> L. (Charadriiformes)	<i>Halcyon smyrnensis</i> (Linn. 1758). (Coraciiformes)

¹ Type-specimen (No. W. 3432/1) in the Collection of the Zoological Survey of India, Indian Museum, Calcutta.

REFERENCES.

- Dubois, G., 1938.—Monographie des Strigeida (Trematoda). *Mém. de la Soc. Neuchatel. des Sci. Nat.* Tome VI.
- Nicoll, W., 1914.—The Trematode Parasites of North Queensland II, Parasites of Birds, *Parasitol.* VII, pp. 105-126.
- Tubangui, M. A., 1931.—Trematode Parasites of Philippine Vertebrates, III : Flukes from Fish and Reptiles. *Philipp. Journ. Sci.* XLIV, pp. 417-424.
- Verma, S. C., 1936.—Notes on Trematode Parasites of Indian Birds, pt. I. *Allahabad Univ. Studies*, Vol. 12, No. 12, pp. 147-188.

EXPLANATION OF LETTERING IN TEXT-FIGURES.

bur., bursa copulatrix ; *cgl.*, genital cone ; *cs.*, cirrus sac ; *extbl.*, excretory bladder ; *extp.*, excretory pore ; *i.*, intestine ; *o.*, ova ; *oes.*, oesophagus ; *os.*, oral sucker ; *ov.*, ovary ; *ph.*, pharynx ; *progl.*, proteolytic gland ; *smv.*, seminal vesicle ; *t.*, testis ; *trib. org.*, tribocytic organ ; *utc.*, uterine coils ; *v.*, vitellaria ; *vs.*, ventral sucker.